IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

SYCAMORE IP HOLDINGS LLC,	§	
	§	
Plaintiff,	§	
	§	
v.	§	Case No. 2:16-CV-588-WCB
	§	LEAD CASE
AT&T CORP., et al.,	§	
	§	
Defendants.	§	

MEMORANDUM OPINION AND ORDER

This order addresses the construction of a single term of the patent at issue in this case, U.S. Patent No. 6,952,405 ("the '405 patent"). Both parties filed briefs (Dkt. Nos. 89, 96, and 101), and on February 24, 2017, the Court held a telephonic hearing to address the issue. The Court issues this order setting forth the Court's construction of the term "transition indicator," which is found in what the parties identify as the relevant patent claims, claims 1, 7, and 8 of the '405 patent.[1]

Claim 1 of the '405 patent recites as follows (with the disputed term emphasized):

> A method for transporting multi-word information groups containing data words and control characters over a communications link, comprising the steps of:
> (a) determining whether each of said information groups includes control characters;
> (b) for each information group that does not include control characters, setting a data indicator and combining said indicator with the data words of the information group to generate an encoded information stream including said data indicator and the data words; and

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[1] The defendants, AT&T Corp.; AT&T Services, Inc.; Teleport Communications America, LLC; CenturyLink Communications, LLC; Savvis Communications Corp.; Level 3 Communications, LLC; Verizon Services Corp.; and Verizon Business Global, LLC, have filed a joint brief on the claim construction issue.

(c) for each information group that includes one or more control characters, generating an encoded information stream by the steps of,

　　　　(i) encoding the control characters to control codes,

　　　　(ii) generating a <u>transition indicator</u> based on the number of control characters for indicating the occurrence of a final control code in the encoded information stream,

　　　　(iii) generating a location pointer for each of the control codes representative of the sequential position within the information group for each of the corresponding control characters, and

　　　　(iv) combining the control codes, the data words, said location pointers, and said transition indicator for each information group to form the encoded information stream.

Claim 7 depends from claim 1 and recites as follows:

The method according to claim 1, further comprising the steps of:

　　　　(d) receiving the encoded information stream from the communications link;

　　　　(e) determining whether said data indicator is set;

　　　　(f) when said data indicator is set, extracting the data words from the encoded information stream to re-generate the information groups;

　　　　(g) when said data indicator is not set, generating the information group by the steps of,

　　　　(i) based on the value of said <u>transition indicator</u>, determining the locations of said location pointers, said control codes, and said data words in said encoded information stream,

　　　　(ii) reading said location points, said control codes, and said data words from said encoded information stream,

　　　　(iii) decoding said control codes to said control characters, and

　　　　(iv) arranging said control characters and said data words based on said location pointers to generate each of the information groups.

Claim 8, an independent claim, recites as follows:

　　　　The method for transporting multi-word information groups, containing data and control characters over a communications link, comprising the steps of:

　　　　(a) encoding each of said information groups to an encoded information stream including a data indicator and data words when said information group does not include control characters; and

　　　　(b) encoding control characters to control codes, generating a <u>transition indicator</u> and location pointers, and combining said control codes, said <u>transition indicator</u>, said location points, and any data words present in said information group to form said encoded information stream when one or more control characters are included in said information group.

The '405 patent has been the subject of prior litigation in this district. See Sycamore IP Holdings LLC v. ABB, Inc., No. 2:15-cv-238-JRG. In the previous case, Judge Gilstrap construed all of the disputed terms in the asserted claims, including the term "transition indicator." After a thorough review of the evidence presented to him, Judge Gilstrap construed the term "transition indicator" to mean "one or more bits that indicate the occurrence of a final control code in an encoded information stream." Sycamore IP Holdings LLC v. ABB, Inc., Dkt. No. 156, at 13-22.

In this case, Sycamore urges the Court to adopt Judge Gilstrap's construction of the term "transition indicator." The defendants request that the Court depart from Judge Gilstrap's construction in favor of the following construction of the term "transition indicator": "a bit to indicate the end of the first part of a variable field that provides information on the control characters." The Court agrees with Sycamore and will adopt Judge Gilstrap's construction of the term "transition indicator."

BACKGROUND

The claim construction issue presented by the parties is intertwined with a priority dispute, which has not been briefed and is not yet ripe for decision. The background of the '405 patent is important to understand the dispute over claim construction as well as the priority issue that is likely to arise later in this litigation.

The '405 patent issued on October 4, 2005. The application for the patent was filed on February 27, 2001. Sycamore claims that the '405 patent is entitled to priority from December 5, 2000, the filing date of a related provisional application.

The patent is directed to a problem that arises during the electronic communication of information over networks when multiple communication protocols are used. Transmission

protocols that are frequently used in local networks, such as Gigabit Ethernet ("GbE"), Fibre Channel, FICON, and ESCON, are inefficient for transmitting data over networks that are designed to carry data at high speeds and over long distances. Long-haul networks therefore typically use different transmission protocols from those used in local networks; in particular, long-haul networks rely on optical communication protocols such as Synchronous Optical Networking ("SONET"). When multiple protocols are used, it is important that messages that are transferred from a system using the GbE protocol to a system using the SONET protocol be transferred without loss or corruption of the data, a process known as "transparent transcoding."

A problem that engineers in the industry encountered during their efforts to devise transparent transcoding schemes was that differences in the bandwidth used by the GbE and SONET systems resulted in the inefficient use of the available SONET bandwidth. In brief summary, information transmitted using the GbE protocol is processed in information groups made up of a total of eight data words and control characters. The data words and control characters are each 10 bits in length, resulting in 80-bit information groups. A GbE network transmits data at a rate of roughly 1.25 gigabits per second. The closest SONET transmission rate has a capacity of 2.405 gigabits per second. That means that when a single GbE signal is sent over a SONET link, almost half the potential bandwidth of the SONET link is wasted.

The objective of the '405 patent was to create a transcoding protocol that would convert the GbE signal into a signal containing fewer bits, thus enabling two GbE signals to be sent at once over the SONET link. To achieve that objective, the inventors of the '405 patent devised a transcoding system in which the 80-bit information group from the GbE transmission is converted into a 65-bit information stream for transmission over the SONET link without the loss of any information. The 65-bit stream includes not only data, but also bits that indicate the

locations and identities of any control characters that are contained in the information group. And the reduction in bits from 80 to 65 means that two GbE signals can be sent simultaneously over the SONET network.

The specification of the '405 patent explains that if the incoming information group contains one or more control characters, the transcoding scheme represents those characters as "control codes." '405 patent, col. 4, ll. 19-32. The transcoding scheme uses a "transition indicator" to indicate when the last control code in the encoded information stream has been sent. Id., col. 5, ll. 18-43. And it uses "location pointers" to indicate where the control characters are located within the original information group. Id., col. 5, ll. 44-67.

The dispute over claim construction focuses on the differences between the December 2000 provisional application and the February 2001 non-provisional application that ultimately matured into the '405 patent. During late 2000, a committee of the American National Standards Institute ("ANSI") was attempting to standardize a method of transcoding information from the GbE protocol to the SONET protocol. One of the inventors of the '405 patent, Danny Tsang, participated in the standard-setting process. He and co-inventor Murat Azizoglu filed a provisional application with the Patent and Trademark Office ("PTO") on December 5, 2000. That application described a scheme for transcoding information from an Ethernet data stream into a SONET data stream.

On December 22, 2000, Mr. Tsang and other committee members submitted a proposal to the ANSI standard-setting committee to use the same encoding scheme that Mr. Tsang had described in his provisional application. The proposal was known as the "Scholten I" protocol. The committee, however, declined to adopt that protocol. Instead, the committee adopted a protocol submitted by Mr. Tsang and others on January 8, 2001, which was known as the

"Scholten III" protocol. That protocol was later accepted by ANSI and the International Telecommunications Union, and was known as international standard G.7041.

On February 27, 2001, Mr. Tsang and Mr. Azizoglu filed the application that ultimately issued as the '405 patent. The language of that application differed in various respects from the language of the provisional application (which is the basis for the priority dispute that underlies the parties' claim construction arguments). Sycamore argues that the February 27, 2001, application clearly covers the Scholten III protocol (and another protocol known as Scholten IV). In addition, Sycamore has taken the position that the February 27, 2001, application is fully supported by the disclosure in the December 5, 2000, provisional application, and that the February 27, 2001, application is therefore entitled to the December 5, 2000, priority date.

DISCUSSION

The defendants argue that the February 27, 2001, application added significant new matter to what was disclosed in the December 5, 2000, provisional application. Given Sycamore's position that the February 27 application did not add new matter to the disclosure in the provisional application, the defendants argue that the claims of the '405 patent must be construed as limited to the disclosure made in the provisional application. The defendants therefore contend that the term "transition indicator" must be construed in accordance with the description of the corresponding structure in the provisional application, i.e., as "a bit to indicate the end of the first part of a variable field that provides information on the control characters." See Provisional Application No. 60/251,341, Dkt. No. 89-3, at 15.

The defendants' argument puts the cart before the horse. The proper method of construing the limitations of the '405 patent is to begin with the language of the claims and the specification of the patent itself. The language of claim 1 provides direct guidance as to the

meaning of the term "transition indicator," as it refers to the function performed by that component. The pertinent claim language reads: "generating a transition indicator based on the number of control characters for indicating the occurrence of a final control code in the encoded information stream." '405 patent, col. 9, ll. 37-39.

The specification supports that description of the function of the transition indicator. It provides that the function of the transition indicator is "for indicating that no more control characters are present in the information group." '405 patent, col. 5, ll. 20-22; see also id., col. 5, ll. 38-39 ("the '0' bit or transition indicator 414_w indicates the last control code within the encoded information stream"); id., col. 5, ll. 41-43 ("If the encoded information stream contains only control codes, the transition indicator 414_w signals the end of the encoded information stream."). Likewise, the specification notes that the control codes and the data words "must be in prearranged sequential locations in the encoded information stream 400 so that the transition indicator 414_w will signal such a transition." Id., col. 6, ll. 17-20. Thus, both the claim language and the specification directly support the plaintiff's proposed construction of the term "transition indicator" as meaning the portion of the encoded information stream that indicates the occurrence of a final control code in the stream.

As for the defendants' proposed construction of the term "transition indicator" as a bit "to indicate the end of the first part of a variable field that provides information on the control characters," the '405 specification makes clear that the transition indicator need not be located at a particular point in the bitstream, such as at the end of the first part of the field that provides information about the control characters. The specification repeatedly states that components of the claimed coding scheme are not required to be arranged in a single fixed order, but "may be arranged in many other predetermined orders within the encoded information stream." '405

patent, col. 4, ll. 57-59. Although the specification expresses a preference for the transition indicator to be "the last bit of the first field," id., col. 5, ll. 20-21, that is only a preference, and the clear implication of referring to a preference is that other placements of the transition indicator are permissible. See also id., col. 5, ll. 65-67 ("it should be appreciated that the first and second fields 414 and 418 and the sub-fields 418_z may be arranged in other predetermined orders"); id., col. 8, ll. 18-21 ("These fields can be arranged in any of a variety of different orders, as desired by the user, within the constraints as described above.").

Importantly, the specification makes the same point with respect to the location of the transition indicator. The control codes and the data words "must be in prearranged sequential locations in the encoded information stream 400 so that the transition indicator 414_w will signal such a transition," but it is "not necessary to have these fields be physically contiguous within the encoded information stream as long as the field can be found according to predetermined logic." '405 patent, col. 6, ll. 17-23. Thus, the specification makes clear, contrary to the defendants' proposed claim construction, that it is not necessary for the transition indicator to indicate the end of the "first part of a variable field that provides information on the control characters."

The defendants argue that the intrinsic evidence in the claims and specification must be disregarded, because the provisional application is narrower than the non-provisional application on its face. In light of Sycamore's position that no new matter was added to the non-provisional application, the defendants argue that the term "transition indicator" must be interpreted in accordance with the provisional application.

The defendants' argument is not persuasive. It is clear from the patent that the term "transition indicator" has a meaning that is broader than is suggested by the defendants'

proposed claim construction. While it may or may not be the case that new matter was added to the non-provisional application, that is an issue that goes to the priority date to which the '405 patent is entitled; it does not govern the construction of the '405 patent, at least with respect to terms the meaning of which is clear in the non-provisional application that issued as the '405 patent.

The defendants make two additional, related arguments in favor of their proposed construction based on the prosecution history. The defendants' arguments focus on the patentees' request for supplemental examination, in which the patentees argued that the '405 patent was entitled to priority from the December 5, 2000, filing date of the provisional application. See Resubmission of Request for Supplemental Examination Under 35 U.S.C. § 257 (Control No. 96/000,060), Dkt. No. 89-4. First, the defendants argue that Sycamore should be judicially estopped from arguing for a construction of the '405 patent that is inconsistent with the provisional application. Second, the defendants argue that Sycamore has disclaimed any claim scope for the encoding scheme that is not the same as the scheme set forth in the provisional application.

1. In the course of its request for supplemental examination, Sycamore represented to the PTO that the claims of the '405 patent were "fully supported" by the provisional application and that the '405 patent "discloses the same information encoding scheme disclosed in the Provisional Application." Resubmission of Request for Supplemental Examination, Dkt. No. 89-4, at 3, 223; see also id. at 9, 59, 140, 189. Given those representations, the defendants argue, Sycamore is judicially estopped from arguing for a claim construction that is broader than would be supported by the text of the provisional application.

The Court does not regard Sycamore as having argued inconsistent positions. Sycamore argued to the PTO that the non-provisional application did not add new matter beyond what was disclosed in the provisional application. In this Court, Sycamore has argued that the term "transition indicator" should be construed in light of the language of the '405 patent. Sycamore further argues that the provisional application is broad enough to provide adequate support for the '405 claims in general and in particular for the "transition indicator" limitation as that term is used in the '405 patent. While Sycamore may ultimately be proved wrong in that assertion, that remains to be seen. What is clear at this juncture is that Sycamore has not made an argument to this Court that is inconsistent with the argument it made to the PTO; Sycamore is simply taking the position that the definition of the term "transition indicator" was not narrower in the provisional application than in the non-provisional application. The Court therefore finds no basis for ruling that Sycamore's claim construction argument must be rejected on the basis of judicial estoppel.

2. The same analysis applies to the defendants' prosecution history disclaimer argument. That doctrine, the defendants argue, prohibits Sycamore from arguing for a construction of "transition indicator" that would encompass an information-encoding scheme that is not the same as the scheme disclosed in the provisional application. The defendants argue that Sycamore's "repeated statements during Supplemental Examination effect a clear and unambiguous disclaimer of any encoding scheme that is not 'the same' as the one in the Provisional Application."

As in the case of the argument on judicial estoppel, the defendants' argument regarding prosecution history disclaimer depends on the defendants' assertion that the provisional application does not support the construction of the term "transition locator" urged by Sycamore.

Even if that is true, however, the result would be the denial of priority to the date of the provisional application, not a construction of the '405 patent that is contrary to what is clearly conveyed by the claims and specification of that patent. Put another way, if Sycamore is wrong in its contention that the provisional application supports the '405 patent with respect to the definition of the term "transition indicator," that could have one of two consequences: denial of priority to the date of the provisional application or a narrow construction of the '405 patent. Given that the term "transition indicator" urged by Sycamore is so clearly supported by the language of the '405 patent, the only logical consequence of lack of support in the provisional application for Sycamore's proposed construction is denial of priority. And that is an issue for another day.[2] The construction of the term "transition indicator" in the '405 patent is clear. The Court therefore adopts Sycamore's construction of that term as "one or more bits that indicate the occurrence of a final control code in an encoded information system."

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[2] The defendants cite <u>IGT v. Alliance Gaming Corp.</u>, No. 2:04-cv-1676, 2007 WL 6334816 (D. Nev. May 9, 2007), in support of their disclaimer argument. In that case, the applicant, IGT, claimed priority to an earlier application for a patent on a slot machine. IGT asserted that the meaning of the term "mechanical member" in its pending application was based on the "moveable mechanical bonus payout indicator" in the earlier application to which IGT sought priority. In light of that concession before the PTO, the district court did not allow IGT to argue that the mechanical member did not have to be a payout indicator; the court reasoned that IGT had expressly disclaimed a broader meaning for that term during prosecution. In this case, Sycamore has not disclaimed the meaning of "transition indicator" set forth in the specification and claims of the '405 patent, either expressly or implicitly; instead, Sycamore has argued that the disclosures in the provisional application are broad enough to support that construction of the term. Sycamore may turn out to be wrong in the argument it makes on the priority issue, but its argument as to the breadth of the provisional application is the opposite of a disclaimer of breadth with respect to the '405 claims.

IT IS SO ORDERED.

SIGNED this 14th day of March, 2017.

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WILLIAM C. BRYSON
UNITED STATES CIRCUIT JUDGE